

REMARKS

Claims 1-40 are pending in this application. Claims 17, 31 and 34 have been amended, and new claim 41 added. New claim 41 corresponds, but is not identical, to claim 31. The amendments to claims 17 and 31 find support, for example, in paragraph [0003] of the published specification. No new matter has been added.

The abstract has been objected to in the Office Action. A new abstract was filed with the Office on July 20, 2006 along with the transmittal of the application, a copy of which is attached and may be found in PAIR. The abstract conforms to proper US format. The objection is therefore traversed.

The Office Action also states that the Oath/Declaration filed July 20, 2006 fails to claim foreign priority benefits. Applicants respectfully disagree. Page 2 of the Declaration specifically refers to German Application 10 2004 003 548.2, filed January 23, 2004, as the priority application. A copy is attached and may be found in PAIR. Acknowledgement is requested by the Examiner.

Claims 17-31 are rejected under 35 USC 101 as directed to non-statutory subject matter. The rejection is respectfully traversed. The Examiner generally states that claims 17-31 are directed to non-statutory subject matter, without providing any additional direction. The mere fact that a claims is a method does not alone make the claim non-statutory. Indeed, each of claims 17-31 is directed to improving traffic distribution in a communication network with multipath routing. The claim specifically requires that the network has a plurality of nodes and links, and that distribution weightings are adjusted according to parameters related to the load or availability of the links (see, for example, claim 17). Clearly, the claim is tied to a particular machine,

namely a communication network having nodes and links, and transforms an article or materials to a different state or thing, namely adjusting distribution weightings according to a parameter related to the load or availability of the link. Hence, the claims meet both requirements of the *Bilski* test.

Claims 17-27 and 30-40 have been rejected under 35 USC 102(e) as anticipated by Tundlam. Claim 28 has been rejected under 35 USC 103(a) as unpatentable over Tundlam in view of Anderson. Claim 29 has been rejected under 35 USC 103(a) as unpatentable over Tundlam in view of Jensen. The rejections are respectfully traversed.

As an initial matter, the Examiner appears to be interpreting the phrase "routers that route data packets over one or more links" in the first sentence of paragraph [0003] of Tundlam's disclosure as an indication of "multipath routing" (Office Action, page 5, lines 2 and 3). Applicants respectfully disagree. In fact, Tundlam discloses that "a collection of one or more links" forms "a logical path" that is required for routing of packets between a source IP address and a destination IP address (paragraph [0003]). Additionally, the reference clearly states that "each router along the path determines the best path on which to send each packet in order to deliver the packets to the ultimate destination". This paragraph of Tundlam explains the well known principles of IP based **single path** ("the best path") point-to-point packet routing along a sequence of network nodes interconnected by links as supported by conventionally used shortest path or least cost optimized routing protocols.

As a matter of fact, Tundlam fails to disclose multipath routing, as required by the instant claimed invention (see, for example claims 17, 31 and 41), and as specified in

paragraph [0003], lines 2 - 4, and further elaborated in paragraph [0007], lines 1 - 3 and lines 6 - 9, of the instant invention's disclosure. As an overview, it is important to appreciate that **multipath routing** is a term of art, and includes the use of **multiple and different paths** through the network towards a destination. As specified in paragraph [0002], lines 1 - 3, and again in paragraph [0007], lines 5 and 6, of the instant invention's disclosure, a communication network with multipath routing as considered there is "made up of nodes and links". Hence, multipath routing, in order to fulfill its objectives of improving service availability and traffic distribution in the network, has to use path diversity over different nodes and links towards a destination. This property of multipath routing is further exploited by the inventions use of "the load capacity of the end nodes of the respective link" (paragraph [0008], line 9, of the instant specification) as a possible criterion for determining the traffic distribution weightings to the links, which would be useless in case of links going to the same node.

Tundlam, on the other hand, works in a completely different environment, attempts to solve a completely different problem, and never leaves the boundaries of conventional single path routing. The invention in Tundlam is dedicated to the interconnection of two adjacent network switches, and is completely independent of the overall setup of the network. In fact, the system is confined to the micro-behavior of packet transmission between two neighbored switches, and thus not suitable to make any contribution to the issue of traffic distribution in any type of a routed network.

Paragraph [0004] of Tundlam explains the setup, wherein multiple parallel physical links are used to interconnect several ports of the same pair of switches (or network nodes) in order to increase the traffic transport capacity between the two switches (lines 1 - 6). Such multiple interconnection links could even be multiplexed in order to use a single physical transmission line between the two switches (lines 7 - 17). Tundlam uses the term "path" in this context as a synonym for a physical transmission link interconnecting the pair of switches. This usage of the term "path" is completely different from its usage in the context of routing, where a "path" usually denotes a possible route (and thus a sequence of links) towards a destination, as explained by Tundlam in paragraph [0003]. In the context of routing, a bundle of physical links as set up by Tundlam can represent a single (logical) link between two adjacent network nodes, whereas a path consists in a sequence of nodes and the related links interconnecting the nodes.

Tundlam seeks "to make efficient use of multiple paths between network switches" and thus "to distribute the transmission load evenly over those multiple paths" (paragraph [0005], lines 1 - 3). Tundlam is "a method and system for distributing data packets within a network node ... in a balanced fashion" (paragraph [0008], lines 1 - 4). As a result, "data packets are distributed more efficiently thereby increasing the overall efficiency of network operation" (paragraph [0008], lines 6 - 8). However, Tundlam only addresses traffic balancing within a bundle of interconnection links between neighbored network nodes, without influencing or improving the overall traffic distribution in the network. This is

contrary to the claimed invention, which seeks to optimize traffic distribution in communication networks with multipath routing.

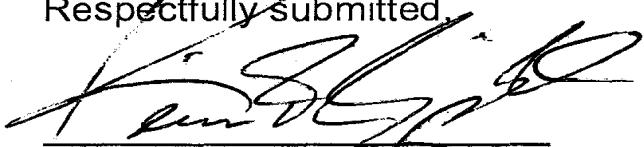
In conclusion, Tundlam fails to disclose multipath routing and is not capable of affecting traffic distribution in a routed network. Tundlam does not address the issue of optimizing traffic distribution in communication networks either with or without multipath routing.

Since the recited structure and method are not disclosed by the applied prior art, claims 17, 31 and 41 are patentable. All other claims, depending directly or indirectly from claim 17 or 31, are similarly patentable.

In the event any further matters requiring attention are noted by Examiner, or in the event that prosecution of this application can otherwise be advanced thereby, a telephone call to Applicants' undersigned representative at the number shown below is invited.

Further, Applicants hereby petition for the Commissioner to charge any additional fees or any underpayment of fees which may be required for this Amendment and which may be required to maintain the pendency of this case at any time during prosecution, or to credit any overpayments, to Deposit Account No. 04-1061, referencing Attorney Docket No. 39090-68.

Respectfully submitted,



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